

claims

What is claimed is :

- Sub
A1
1. Device for the production of gasket layers for single or multiple layered gaskets from one respective gasket layer section of a starting material comprising several continuous gasket layer sections, comprising

09892052.062601

a follow-on combination tool with several machining stations following one another along a direction of feed, the gasket layer sections being machined in said stations during operating cycles, wherein at least one of the machining stations is designed as a station for cutting outer contour lines, facing outer contour lines of two gasket layers adjacent to one another being cut in said cutting station by means of a tool for cutting outer contour lines, and

a feeding device for moving the gasket layer sections further along the direction of feed by a feed distance between two operating cycles,

wherein the tool for cutting outer contour lines is designed such that the outer contour lines of the two adjacent gasket layers are cut with the same cutting edge and that the feed distance is essentially the same as the extension of the outer contour of a finished gasket layer or a group of finished gasket layers along the direction of feed.

2. Device as defined in claim 1, wherein at least one of the machining stations is designed as a free-cutting station arranged in front of the station for cutting outer contour lines in the direction of feed, at least one free-cutting area being cut out of the starting material in said free-cutting station, the cutting edge of the tool for cutting outer contour lines of the station for cutting outer contour lines dipping into said free-cutting area during the cutting procedure.
3. Device as defined in claim 2, wherein the free-cutting tool of the free-cutting station is designed such that the edge of the free-cutting area extends transversely to the outer contour lines cut by the tool for cutting outer contour lines.
4. Device as defined in claim 3, wherein the free-cutting tool of the free-cutting station is designed such that the edge of the free-cutting area extends essentially at right angles to the outer contour lines cut by the tool for cutting outer contour lines.
5. Device as defined in claim 1, wherein the station for cutting outer contour lines is designed as a separating station, the adjacent gasket layers being separated completely from one another in said station.
6. Device as defined in claim 5, wherein the station for cutting outer contour lines is the last machining station of the follow-on combination tool in the direction of feed.

09892052-062601

SUB
A

Sub
A1

7. Device as defined in claim 1, wherein the surfaces of the tool for cutting outer contour lines forming the cutting edge form with one another an angle of approximately 90°.

8. Device as defined in claim 1, wherein the feed distance is essentially the same as the extension of the outer contour of a group of finished gasket layers and that at least one of the machining stations is designed as a separating station, adjacent gasket layers of the group being separated completely from one another in said station.

9. Process for the production of gasket layers for single or multiple layered gaskets from one respective gasket layer section of a starting material comprising several continuous gasket layer sections, wherein the gasket layer sections are machined during operating cycles in a follow-on combination tool having several machining stations following one another along a direction of feed, wherein at least one of the machining stations is designed as a station for cutting outer contour lines, facing outer contour lines of two adjacent gasket layers being cut in said station by means of a tool for cutting outer contour lines, and

wherein the gasket layer sections are moved further along the direction of feed by a feed distance by means of a feeding device between two operating cycles,

wherein the outer contour lines of the two adjacent gasket layers are cut with the same cutting edge of the tool for cutting outer contour lines and that the feed

09892052-062601

SUB
A1

distance is selected to be essentially the same as the extension of the outer contour of a finished gasket layer or a group of finished gasket layers along the direction of feed.

- 09892052-062601
- SUB
A1
10. Process as defined in claim 9, wherein at least one of the machining stations is designed as a free-cutting station arranged in front of the station for cutting outer contour lines in the direction of feed, at least one free-cutting area being cut out of the starting material in said free-cutting station, the cutting edge of the tool for cutting outer contour lines of the station for cutting outer contour lines dipping into said free-cutting area during the cutting procedure.
 11. Process as defined in claim 10, wherein the free-cutting area is cut by the free-cutting tool of the free-cutting station such that the edge of the free-cutting area extends transversely to the outer contour lines cut by the tool for cutting outer contour lines.
 12. Process as defined in claim 11, wherein in that the free-cutting area is cut by the free-cutting tool of the free-cutting station such that the edge of the free-cutting area extends essentially at right angles to the outer contour lines cut by the tool for cutting outer contour lines.

- 50
A1
13. Process as defined in claim 9, wherein the adjacent gasket layers are separated completely from one another in the station for cutting outer contour lines designed as a separating station.
14. Process as defined in claim 13, wherein the station for cutting outer contour lines is the last machining station of the follow-on combination tool in the direction of feed.
15. Process as defined in claim 9, wherein the outer contour lines are cut in the station for cutting outer contour lines by means of a cutting edge formed by surfaces of the tool for cutting outer contour lines forming with one another an angle of approximately 90°.
16. Process as defined in claim 9, wherein the feed distance is selected to be essentially the same as the extension of the outer contour of a group of finished gasket layers and that adjacent gasket layers of the group are separated completely from one another in a separating station.
17. Process as defined in claim 16, wherein the group of gasket layers comprises at least two gasket layers, the facing outer contour lines of said layers being cut with the same cutting edge of a tool for cutting outer contour lines.

09092052-0522601

- 068705** **05** **05**

~~50A~~